

In re Marsh et al.
Serial No.: 09/732,467

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application:

- 1 1. (Presently Amended) A computer system communicatively coupled to a
2 network, comprising:
3 a programmable non-volatile memory;
4 at least one microprocessor operatively coupled to execute at least one instruction
5 from the programmable non-volatile memory in response to a boot request, the
6 microprocessor configured to controllably write to the programmable non-volatile
7 memory; and
8 at least one fixed storage device operatively coupled to the at least one
9 microprocessor, the storage device containing a boot image that is configured with
10 appropriate instruction code suited to transition the at least one microprocessor to an
11 operational mode, wherein the at least one fixed storage device receives and stores a
12 ~~modified~~ boot memory comprising:
13 a system loader;
14 a configuration file; and
15 executable files configured containing execution code and data necessary
16 ~~for the at least one microprocessor~~ to write a firmware upgrade to the
17 programmable non-volatile memory.
- 1 2. (Canceled)
- 1 3. (Presently Amended) The computer system of claim 2 1, wherein the
2 ~~firmware upgrade patch~~ executable files ~~comprises~~ comprise an install application.
- 1 4. (Presently Amended) The computer system of claim 2 1, wherein the
2 ~~firmware upgrade patch~~ comprises at least one fixed storage device receives and stores a
3 ~~copy of the~~ a new firmware.

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1 5. (Presently Amended) The computer system of claim 2 1, wherein the
2 ~~firmware upgrade patch comprises~~ at least one fixed storage device receives and stores an
3 application.

1 6. (Original) The computer system of claim 5, wherein the application
2 comprises a bootable kernel.

1 7. (Original) The computer system of claim 6, wherein the bootable kernel
2 comprises an operating system.

1 8. (Original) The computer system of claim 6, wherein the bootable kernel
2 comprises a file management system.

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1 9. (Presently Amended) A computer network, comprising:
2 a plurality of workstations communicatively coupled to a network infrastructure,
3 each of the plurality of workstations configured with a non-volatile memory containing a
4 common firmware version designated for replacement and ~~configured with a fixed~~
5 storage device containing a boot image having appropriate instruction code suited to
6 transition the respective workstation to an operational mode;
7 a user input device communicatively coupled to at least one workstation, the at
8 least one workstation communicatively coupled to the network infrastructure, ~~the at least~~
9 ~~one workstation~~ and configured with write access permission for the respective fixed
10 storage device associated with each of the plurality of workstations, wherein an input
11 from the user input device initiates a transfer of a ~~modified boot patch~~ memory map and
12 a firmware upgrade patch to the plurality of workstations, the firmware upgrade patch
13 comprising a bootable kernel.

1 10. (Presently Amended) The network of claim 9, wherein the firmware
2 upgrade patch and ~~the modified boot~~ a patch memory identified by the patch memory
3 map include all instruction code necessary to support the replacement of the common
4 firmware version by each of the respective plurality of workstations.

1 11. (Canceled)

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1 12. (Presently Amended) The network of claim 10 9, wherein the firmware
2 upgrade patch comprises an application that contains an operating system.

1 13. (Presently Amended) The network of claim 10 9, wherein the firmware
2 upgrade patch comprises an application that contains a file management system.

1 14. (Original) A computer system communicatively coupled to a network,
2 comprising:
3 means for accessing data stored on a memory device that retains data when power
4 is removed from the memory device, the accessing means responsive to power being
5 applied to the workstation; and
6 means for selectively writing to the memory device in response to a remote input
7 designated to initiate the replacement of the data stored on the memory device, wherein
8 the new data to be stored and a bootable kernel are stored on a fixed memory device
9 within the workstation in response to the remote input.

1 15. (Original) The computer system of claim 14, wherein the accessing means
2 comprises a programmable non-volatile memory.

1 16. (Original) The computer system of claim 14, wherein the writing means
2 further comprises:
3 means for storing an operating system and a file management system on the fixed
4 memory device; and
5 means for modifying an initial system loader address in response to the remote
6 input.

1 17. (Original) The computer system of claim 15, wherein the programmable
2 non-volatile memory comprises an electrically erasable programmable read only
3 memory.

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1 18. (Presently Amended) A method for performing a firmware upgrade,
2 comprising:
3 delivering a firmware install patch containing a ~~modified~~ boot image to a boot
4 disk within a plurality of networked workstations each of said workstations having a
5 firmware version designated for the upgrade;
6 initiating an install application contained within the firmware install patch, said
7 install application containing instructions suited to perform the firmware upgrade;
8 modifying an initial system loader in response to the install application to direct a
9 microprocessor to execute instructions from the ~~modified~~ boot image upon a subsequent
10 microprocessor reset input;
11 initiating a microprocessor reset input in response to the install application that
12 loads a plurality of instructions in accordance with the ~~modified~~ boot image;
13 erasing the firmware within each of the plurality of networked workstations in
14 response to the install application; and
15 writing the new firmware to each of the plurality of networked workstations in
16 response to the install application.

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1 19. (Original) The method of claim 18, wherein delivering a firmware install
2 patch comprises a network data transfer.

1 20. (Presently Amended) The method of claim 18, wherein the delivered
2 firmware install patch comprises a ~~modified~~ boot image that contains an operating
3 system, a file manager, and at least one executable configured to verify the version of the
4 firmware stored in the workstation prior to writing the new firmware.

1 21. (Presently Amended) The method of claim 18, further comprising:
2 installing an operating system that requires the new firmware;
3 installing a software ~~patches patch~~ that ~~require~~ requires the new firmware;
4 redirecting the initial system loader to select the appropriate memory address
5 upon subsequent system boot requests to apply the upgraded firmware, operating system,
6 and software ~~patches patch~~; and
7 removing the firmware install patch from the workstation.

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1 22. (Original) The method of claim 20, wherein the flash application
2 comprises a bootable kernel.

1 23. (Original) The method of claim 20, wherein the flash application
2 comprises a system loader interface.

1 24. (Original) The method of claim 20, wherein the flash application
2 comprises a reboot logic.

1 25. (Original) The method of claim 20, wherein the flash application
2 comprises a firmware update logic.

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1 26. (Original) The method of claim 20, wherein the flash application
2 comprises a non-volatile memory interface.

1 27. (New) A workstation communicatively coupled to a network, comprising:
2 a programmable non-volatile memory having a first firmware;
3 at least one microprocessor operatively coupled to controllably write to the
4 programmable non-volatile memory and execute at least one instruction from the
5 programmable non-volatile memory in response to a boot request; and
6 at least one fixed storage device operatively coupled to the at least one
7 microprocessor, the storage device containing a firmware patch comprising:
8 a patch memory map comprising an index that identifies the location of:
9 an install application;
10 a second firmware different from the first firmware; and
11 a flash application comprising:
12 a bootable kernel including a system loader interface and
13 reboot logic;
14 a firmware update logic; and
15 a non-volatile memory interface.

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1 28. (New) The workstation of claim 27, wherein a system loader executes the
2 flash application.

1 29. (New) The workstation of claim 27, wherein the firmware update logic
2 and the non-volatile memory interface store the second firmware on the non-volatile
3 memory.

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1 30. (New) The workstation of claim 27, wherein the flash application instructs
2 the system loader to select the bootable kernel upon a boot request.

1 31. (New) The workstation of claim 30, wherein upon the occurrence of the
2 boot request, the new firmware and system loader transfer an operating system to a
3 random access memory communicatively coupled to the at least one microprocessor.

1 32. (New) The workstation of claim 30, wherein the install application
2 executes a file system operation.

1 33. (New) The workstation of claim 32, wherein the file system operation
2 results in the removal of the firmware patch from the at least one fixed storage device.
